User Guide

Includes information about your NBN equipment

Please refer to this guide, and to the important safety warnings on the back cover before attempting to perform maintenance on your equipment.

NBNCo

Bringing broadband to life

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YOUR NBN USER GUIDE

Congratulations on connecting to the National Broadband Network (NBN) through your chosen service provider. Services delivered over the NBN have the potential to transform every aspect of our lives including healthcare, education, business and government services. Broadband, with its greater capacity for traffic, is the means to unlock this potential and is a core infrastructure for this century. Your new fibre optic connection gives you access to this vital communications infrastructure.

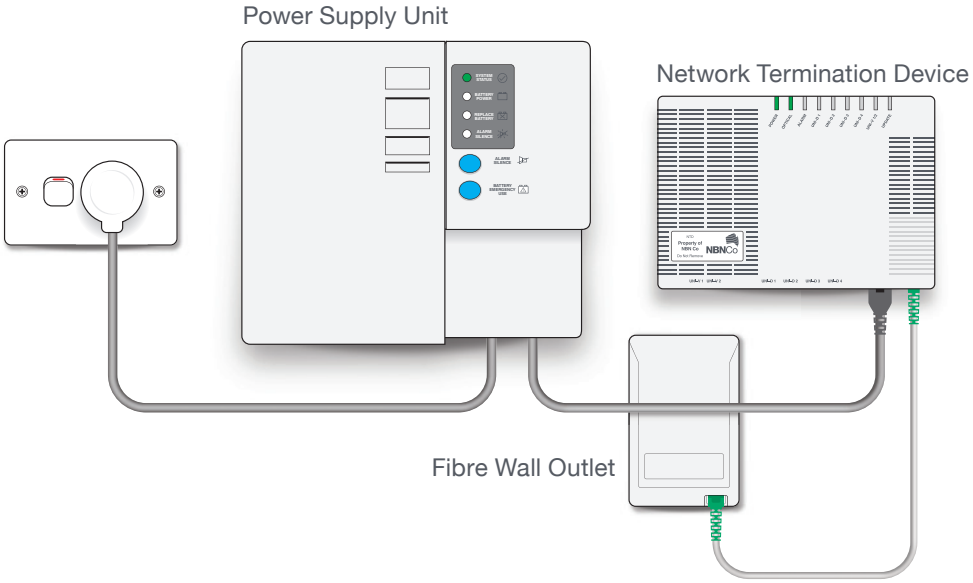
This guide provides information on how to ensure your NBN connection equipment stays in good working order. It also outlines what to do should your system not work properly.

www.**nbnco**.com.au

QUICK START GUIDE

Once your equipment has been installed and checked, read these quick start steps to begin enjoying your new NBN service.

1. Connect compatible equipment to the Network Termination Device, using the port designated for that service as directed by your telephone and internet service providers.
2. If you have arranged a telephone service to be supplied through the voice (UNI-V) port then your telephone should be connected to the designated active voice (UNI-V) port on the Network Termination Device OR to your existing telephone sockets. Your telephone and internet service providers should give you information about which connection to use.
3. Check that the Network Termination Device is connected to the Power Supply Unit.
4. Check that the Power Supply Unit is plugged into the mains power socket and is switched on.



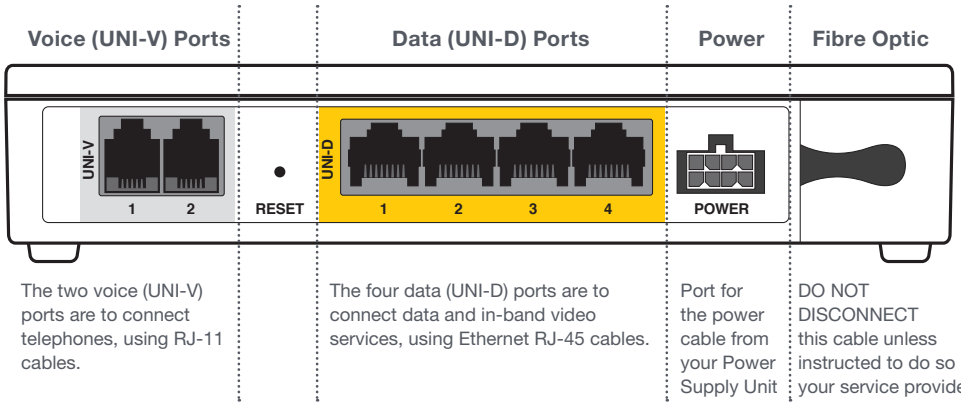
The Power Supply Unit ‘system status’ light will glow green.

The Network Termination Device ‘power’ and ‘optical’ lights will both glow green.

All services that your telephone and internet service providers have agreed to provide you with should now be working.

CONNECTING THE NETWORK TERMINATION DEVICE TO YOUR OWN EQUIPMENT

The back of your Network Termination Device will have a row of ports like this;


Voice (UNI-V) Ports
Data (UNI-D) Ports
Power
Fibre Optic
UNI-V
1
2
RESET
UNI-D
1
2
3
4
POWER
The two voice (UNI-V) ports are to connect telephones, using RJ-11 cables.
The four data (UNI-D) ports are to connect data and in-band video services, using Ethernet RJ-45 cables.
Port for the power cable from your Power Supply Unit
DO NOT DISCONNECT this cable unless instructed to do so by your service provider

If you have chosen a telephone service from your service provider to be delivered through a voice (UNI-V) or data (UNI-D) port, your service provider will advise you how to connect your telephone(s).

Your broadband services will be delivered through the data (UNI-D) ports on the Network Termination Device. Your service provider(s) should advise you which data (UNI-D) ports they have designated for your services, and how to connect any necessary equipment for these services.

All the power and fibre optic cables required for the Network Termination Device to operate will be supplied and connected by your installer. Any cables required to connect your own internet or telephone equipment to the Network Termination Device will need to be supplied by you or your service provider.

If you have followed the instructions from your service provider but your phone, internet or other broadband connections are NOT working, or there are any red or flashing lights on the Network Termination Device or Power Supply Unit, go straight to the TROUBLESHOOTING guide on page 14.

IMPORTANT! Risk of injury

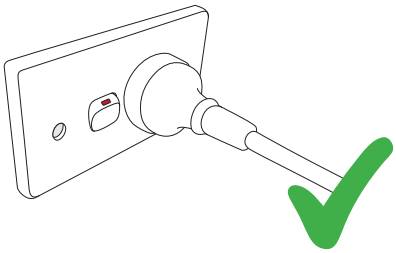
Do NOT disconnect, tamper with or look into the laser light emitted from the fibre optic cable. Doing this could damage your eyes.

MAINTAINING YOUR EQUIPMENT

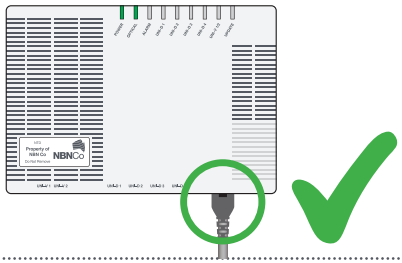
The NBN equipment in your premises should require very little maintenance if properly cared for.

Here are some important do's and don'ts to ensure the Network Termination Device and Power Supply Unit stay in good working order.

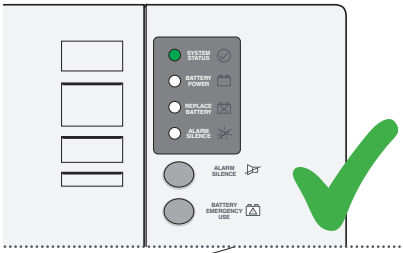
INSIDE YOUR PROPERTY



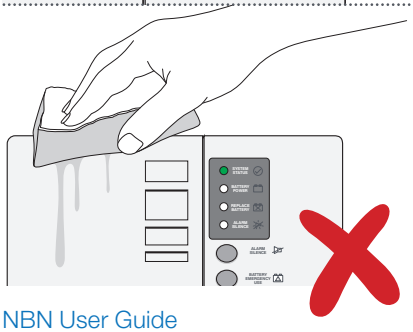
Keep the Power Supply Unit plugged directly in to the mains power at all times and turned on. If not plugged in and turned on, it will revert to battery power (if installed) and will quickly deplete the batteries which should be reserved for emergencies. This will cause an interruption to service when switched back on and will eventually degrade the battery.



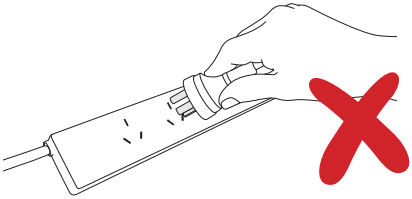
Keep the Network Termination Device plugged in to the Power Supply Unit. It will not function without power from the Power Supply Unit.



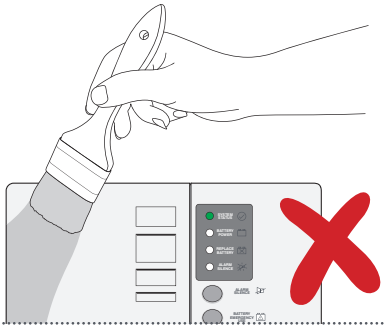
Check the indicator lights on the Power Supply Unit regularly. If the system status is not showing a green light or any other lights are on, refer to the guide on page 13.



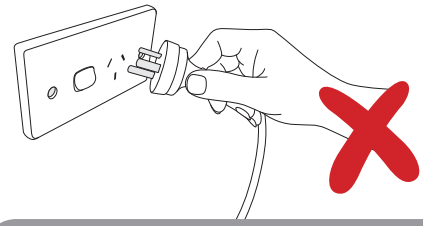
Do not use water to clean the equipment.



Do not connect the Power Supply Unit to the mains power using an extension cable, double adapter, power board or any other kind of secondary plug or socket.

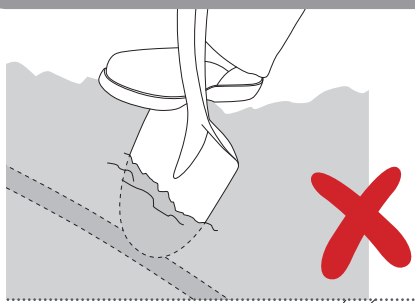


Do not cover or paint any part of the equipment.

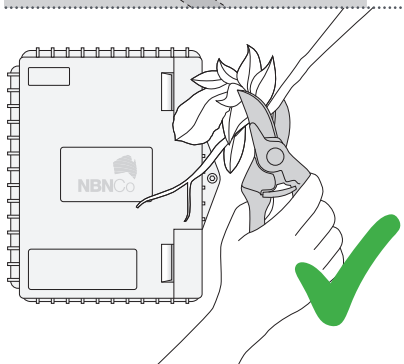


Do not unplug the Power Supply Unit or Network Termination Device unless you need to replace the battery, are going away for an extended period or are otherwise directed to do so by your service provider.

OUTSIDE YOUR PROPERTY



Ensure you know where any underground cables are located before digging to avoid accidental damage to them.



Keep branches and shrubs away from the fibre optic cable and Premises Connection Device.

THE POWER SUPPLY UNIT

Powering your NBN service

We have installed a Power Supply Unit, which draws power from your power point to provide a steady 12V power supply to your Network Termination Device.

If your mains power fails, the Power Supply Unit will automatically switch to its backup battery power. This will maintain a standard, non-powered telephone service connected to an in-service voice (UNI-V) port ONLY.

It's important to note that the backup battery will only power some phone services using the voice (UNI-V) port for **2-3 hours** following a mains power failure. When approximately 50% of the battery charge has depleted the backup battery will turn off to preserve the remaining charge for emergency use. This should provide you with a total of approximately 5 hours of backup battery power without mains power under typical circumstances to make calls over a standard non-powered telephone connected to the voice (UNI-V) port. Extreme cold (less than -1 degrees Celsius) may reduce the amount of time the battery backup will last.

NOTE: The data (UNI-D) ports cannot provide any service while the Power Supply Unit is operating on backup battery power. All devices connected to data (UNI-D) ports such as modems and routers will be unable to access the internet until mains power is restored. This means if you have an 'internet phone service' connected to your data (UNI-D) port, it will not work on the backup battery during a mains power failure. Even if the Power Supply Unit has a properly functioning backup battery, cordless phones, alarms and other devices that use mains power and do not have **their own** backup batteries will not function if there is a power failure.

Please ask your service provider to clearly explain to you whether and how your phone services will continue to operate without mains power. The ability to make calls during a power failure (including to 000 Emergency Services) depends on the service you choose from your service provider.

To ensure the battery backup for voice (UNI-V) phone services is ready and working when you need it, you will need to maintain the Power Supply Unit and backup battery following the advice given in this guide. Make sure you regularly check the battery indicators, (see page 13 for a guide to indicator lights and alarms) and charge and maintain the battery in the Power Supply Unit.

EMERGENCY CALLS CHECKLIST

To make and receive any telephone calls including 000 Emergency Service calls, for a limited time during a power failure, you need to have all of the following in place:

1. A service through your service provider that supports phone calls through the voice (UNI-V) port;
2. The backup battery installed, charged and operating correctly (all instructions are included in this guide); and
3. A telephone that does NOT require an external power source connected to one of the voice (UNI-V) ports on your Network Termination Device.

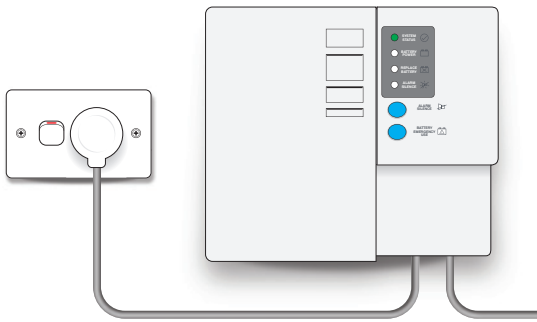
Maintaining the mains power supply

The power cables and the power point used by the Power Supply Unit must be maintained in a safe working condition.

Ensure that the Power Supply Unit is always plugged directly into a fixed power point. The Power Supply Unit should never be connected using an extension cord, double adapter, a power board or any other kind of secondary plug or socket.

Disconnecting the mains power supply will cause all data services delivered through the Network Termination Device to stop working.

It is not advisable to switch off your NBN equipment unless you are going away for an extended period of time. The power used by the system is minimal, equivalent to a 10W light bulb, and the life of the battery will be reduced if the mains power is routinely turned on and off.



IMPORTANT!

If your Power Supply Unit is showing a red light next to the ‘REPLACE BATTERY’ symbol then you need to follow the steps on the next page to replace your battery with a new one.

INSTRUCTIONS FOR REPLACING YOUR BACKUP BATTERY

1. Purchase a new battery

You need to purchase a new battery of identical type and rating to the original, which can be bought at most specialist battery retailers.

Specifications: 12V/7Ah (or 7.2Ah) AGM Sealed Lead Acid Battery (6 Cells) with a 5+ year design life and flame retardant case.

2. Remove the old battery

1. Turn off at the power point and disconnect the Power Supply Unit from the mains power.
2. Open the front cover of the Power Supply Unit (A).
3. Disconnect the red '+' plug from the battery (B).
4. Push the tabs holding the battery, one above and one below, outward and then lift the battery out (C).
5. Disconnect the black '–' plug and remove battery (D).

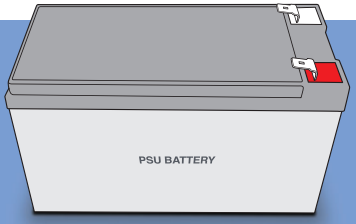
3. Install the new battery

1. Reconnect the black '–' plug to the new battery (E).
2. Push the battery retaining tabs outward and insert the battery into the Power Supply Unit (F).
3. Reconnect the red '+' plug to the new battery (G).
4. Make sure the wires are not being pinched by the battery or the front cover.
5. Close the front cover and plug the Power Supply Unit back into the power point and turn it on.
6. The new battery will take 24 hours to completely charge. Please retain the old battery during this time unless its charge was completely exhausted.
7. Please note, your broadband and/or telephone service delivered over the NBN will be unavailable during and for up to 10 minutes after the battery is replaced.

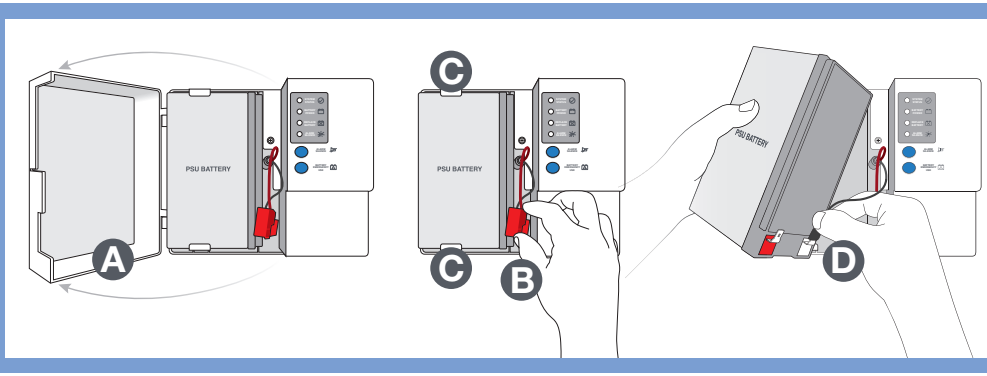
PLEASE RECYCLE YOUR OLD BATTERY

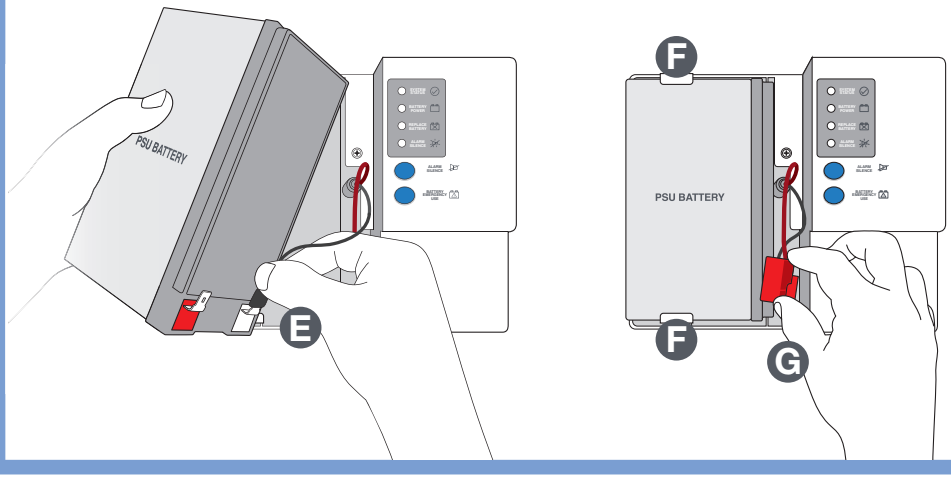
Sealed Lead Batteries supplied by NBN Co are 100% recyclable. Please don't throw your old battery in the bin. Take it to a recycling facility, or ask about exchanging it where you purchased your new battery.

Typical battery dimensions 94 x 151 x 65mm



STOP! Before going any further please read the Important Safety Warnings on the back cover





WHAT TO DO IF MAINS POWER FAILS

If your mains power fails, the Power Supply Unit will beep once and automatically switch to its backup battery power. This will maintain a standard, non-powered telephone service connected to an in-service voice (UNI-V) port ONLY for approximately 2-3 hours under typical conditions.

When approximately 50% of the battery charge has depleted the Power Supply Unit will turn off the system, saving a further approximate 2-3 hours charge. This saved charge can then be used to make emergency calls if needed.

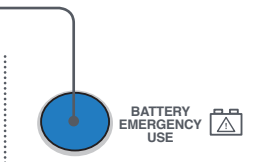
As the battery depletes to approximately 50% charge (half capacity);

- The Battery Power indicator will flash and the Power Supply Unit will begin to beep four times a minute,
- The beeps then stop and the Power Supply Unit will turn itself off to preserve the remaining charge for use in case of an emergency.

To access remaining charge in emergencies

Press and hold the BATTERY EMERGENCY USE button for two seconds until the Power Supply Unit beeps once and all 4 lights flash. This will access the remaining charge for a further 2-3 hours. Once activated you cannot turn the BATTERY EMERGENCY USE button off again.

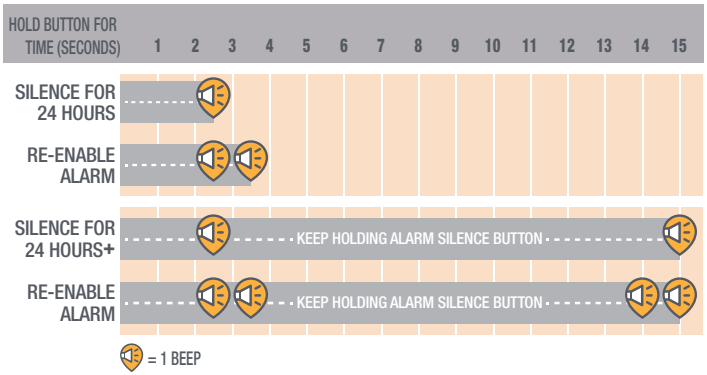
After the battery is completely flat, the BATTERY EMERGENCY USE button will not work again until mains power has been restored and the battery has recharged.



Alarm silence function

You can silence audible alarm sounds using the ALARM SILENCE button.

Press and hold the button to temporarily silence or re-enable the alarm sounds for either 24 hours or longer:


HOLD BUTTON FOR TIME (SECONDS)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
SILENCE FOR 24 HOURS
RE-ENABLE ALARM
SILENCE FOR 24 HOURS+
KEEP HOLDING ALARM SILENCE BUTTON
RE-ENABLE ALARM
KEEP HOLDING ALARM SILENCE BUTTON
= 1 BEEP

POWER SUPPLY UNIT INDICATOR LIGHTS AND ALARM SOUNDS

The following displays are present on the front of the unit:

	Light **ON**	Light **BLINKING**	Light **OFF**
SYSTEM STATUS	Normal	System fault	No mains power and Power Supply Unit is off
BATTERY POWER	Using battery No mains power	Battery charge low and will soon be flat	Using mains power or battery is flat
REPLACE BATTERY	Battery missing or battery has degraded and should be replaced		Battery OK
ALARM SILENCE	Audible alarms silenced	Audible alarms silenced for 24 hours	Audible alarms enabled

If the Power Supply Unit is working normally on mains power, the SYSTEM STATUS light is green and the BATTERY POWER and REPLACE BATTERY lights are off.

Alarm sounds

The following list describes the different types of audible alarm sounds you might hear:

CAUSE	ALARM SOUND
POWER FAILURE Loss of mains power	Beeps once
REPLACE BATTERY Battery self test fails	Beeps once every 15 minutes
LOW BATTERY Less than 50% remaining	Beeps 4 times every minute
AUDIBLE ALARM ON Alarm function is enabled	Beeps twice when enabled
AUDIBLE ALARM OFF Alarm function is disabled	Beeps once when disabled

TROUBLESHOOTING CHECKLIST

If any services provided through your Network Termination Device stop working (e.g internet, IPTV or telephone) as a first step you make the following checks:

1. POWER CHECK

Is everything plugged in and turned on?

- Network Termination Device
- Power Supply Unit
- All cables and power points
- Your own equipment

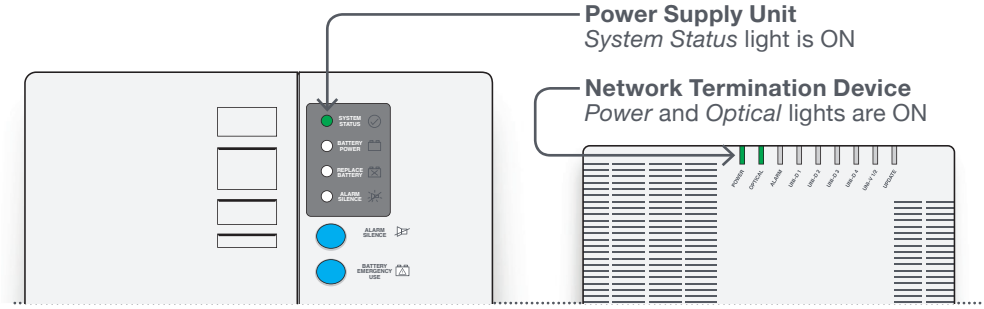
2. EXTERNAL FIBRE OPTIC CABLE CHECK

Has the fibre optic cable connection from the street been damaged?

For example, a fallen branch may have damaged the cable. If you think this may be the case, do NOT try to remove it or repair the cable yourself. Contact your service provider immediately.

3. INDICATOR LIGHT CHECK

Check the indicator lights on your Power Supply Unit and Network Termination Device.



If the lights on your Power Supply Unit do not match those shown in this diagram then refer to the Power Supply Unit lights and indicators section of this guide on page 13. If you still can't identify the problem or the solution note down which lights are glowing and then contact your service provider.

If the lights on your Network Termination Device do not match those shown in this diagram then refer to the Network Termination Device indicator lights troubleshooting section of this guide on page 16. If you still can't identify the problem or the solution it is a good idea to note down which lights are glowing and then contact your service provider for assistance.

4. TELEPHONE CHECK

If you have a telephone service which plugs into the Network Termination Device, check the following:

- Is the correct voice (UNI-V) port on the Network Termination Device connected to your in-home wiring or a telephone?
- Is there a dial tone?
- Does your phone work if you plug it directly into the voice (UNI-V) port of the Network Termination Device?

If your phone still does not work contact your service provider for assistance.

5. INTERNET CHECK

- If you have an NBN broadband connection, is it working?
- If you have an IPTV connection, is it working?

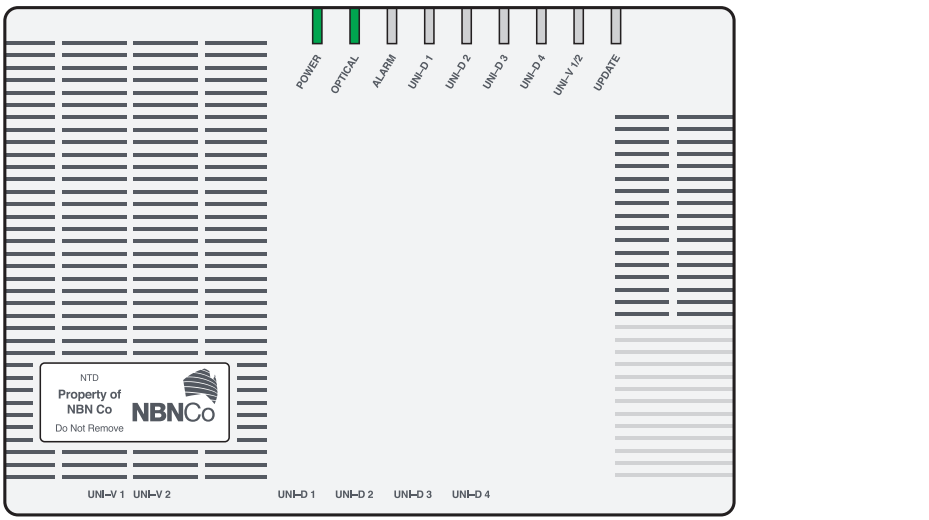
NETWORK TERMINATION DEVICE INDICATOR LIGHTS

POWER INDICATOR

INDICATOR	MEANING	ACTION
OFF	This means there is no power to your Network Termination Device	Check the Power Supply Unit is plugged in and switched on and is connected to your Network Termination Device. If there is still no power light contact your service provider
RED	Your Power Supply Unit is operating on backup battery power	If there is a mains power failure you will only have a phone service if it is connected through your voice (UNI-V) port. You should refer to the Power Supply Unit section of this guide immediately
GREEN	Your power supply is working normally	No action is required
GREEN FLASHING	Your Network Termination Device is starting up	No action is required. The flashing light should turn into a green solid light shortly

OPTICAL INDICATOR

INDICATOR	MEANING	ACTION
OFF	Your Network Termination Device has been disabled externally	Contact your service provider for further instructions
RED	Your Network Termination Device has lost connection with the fibre network	Contact your service provider for further instructions
GREEN	Your Network Termination Device is connected and working properly	No action is required
GREEN FLASHING	This is normal and simply means there is activity on the network	No action is required



ALARM INDICATOR

INDICATOR	MEANING	ACTION
OFF	Your Network Termination Device is working but you have no devices connected	No action is required
RED	Your Network Termination Device has a fault and is not working normally	Contact your service provider for further instructions
GREEN	Your Network Termination Device is working normally and is connected	No action is required

DATA (UNI-D) INDICATORS

INDICATOR	MEANING	ACTION
OFF	You do not have an active service using this port at this time	This may simply mean that connected devices are not active at the moment. If you are having difficulty with connected devices then contact your service provider for further instructions
YELLOW	There is a 1Gbps device detected on the network	No action is required
YELLOW FLASHING	There is 1Gbps data activity detected on the network	No action is required
GREEN	There is a 10/100Mbps device detected on the network	No action is required
GREEN FLASHING	There is 10/100Mbps data activity detected on the network	No action is required

VOICE (UNI-V) INDICATORS

INDICATOR	MEANING	ACTION
OFF	You do not have an active phone service using this port at this time	No action is required
GREEN	One or more telephones are off the hook (being used)	No action is required
GREEN FLASHING	One or more telephones have been off the hook for more than 1 hour	Check if someone in your household is using the phone, and if not check to see if any of your handsets have been left off the hook by accident

UPDATE INDICATOR

INDICATOR	MEANING	ACTION
OFF	Normal	No action is required
RED	Your Network Termination Device has failed to download software	Contact your service provider for further instructions
GREEN	Your Network Termination Device is successfully downloading software	No action is required

FREQUENTLY ASKED QUESTIONS

What if I damage the equipment?

You are responsible for the Network Termination Device, Power Supply Unit, Battery Backup, Premises Connection Device and the fibre optic cable on your property, just as you are responsible for connection equipment for other services such as power, phone and gas. If you accidentally damage any of the equipment or cable, you will need to contact your service provider for repair and you may be charged for the repair.

Is the NBN fibre optic cable safe?

Fibre optic cables do not conduct electricity. However, there are other safety hazards associated with handling fibre optic cable so you must never disconnect, tamper with or look directly into the laser light emitted from the fibre optic cable. The laser light found inside the fibre optic cabling is invisible (infrared) so you should assume there is laser light present even if you cannot see it.

Is the NBN equipment installed in my home or premises safe?

The Network Termination Device and its power supply only use fixed cables. That means they are not designed to nor intended to emit any wireless radiation. The Network Termination Device and its power supply have been tested to ensure they meet Australian Safety and Emission requirements in accordance with AS/NZS CISPR22 and AS/NZS 60950-1. These are the standards that consumer appliances are generally required to comply with. The NBN Co Network Termination Device and Power Supply Unit passed these tests.

The Network Termination Device has a laser warning label on it, in accordance with Australian standards. This label is similar to the laser warning the standards require for CD and DVD players, computer CD/DVD readers, laser pointing devices, laser ‘spirit’ level tools etc. The Network Termination Device is designed to automatically turn off its laser in case the optical fibre is pulled out or broken, and this happens within thousandths of a second of a break occurring. NBN Co nevertheless recommends that people keep away from fallen or broken cables as a precaution – because it’s not possible to easily tell whether a fallen or broken cable is a safe NBN Co cable, or an unsafe cable from a different utility.

Who do I contact for assistance?

Your service provider will help you if you have any questions or need to report a fault.

If I’m going away for a while can I unplug my service to save power?

Yes, if you are away for an extended period you can unplug your Power Supply Unit. However you must also disconnect the Network Termination Device from the Power Supply Unit to ensure it does not continue to operate on back up battery power. When you return simply plug back in and the system will restart after a few minutes.

Can I plug the Power Supply Unit into a power board?

No. For the Network Termination Device and Power Supply Unit to function correctly, the power supply cord must be directly connected to its own fixed power point. Do not connect the power supply cord to a double adapter, extension cord, power board, or any other kind of secondary plug or socket.

Can I connect other devices to the unused ports on the Network Termination Device?

Each port on the Network Termination Device is reserved for a different service if you choose to acquire services from more than one service provider. Ports that you've not currently acquired services for will not be active. If you connect one of your devices to an unused Network Termination Device port it will not have access to a service.

What if I want to move the Network Termination Device?

If you need to have equipment or cables relocated, contact your service provider who can advise you of the cost and also arrange for a technician to move the equipment. When considering relocating NBN equipment or cables you should bear in mind the following:

- The equipment must be protected from water, steam or excessive heat.
- The location must be well ventilated, near a dedicated power point and easy for you to check the indicator lights.
- The equipment must be positioned in a location away from busy areas and protected from damage, where there is sufficient light to see if the device is functioning correctly.
- You are responsible for the relocation cost.

I have a monitored home or premises security system, will it work over the NBN?

It is expected that most monitored security systems will operate over the NBN. However, if you would like to use an existing system, you should check with your security provider to ensure that your particular equipment and service is NBN-compatible.

Can I install in-home cabling myself?

Even though it is not required, if you choose to install permanent cabling through wall, floor or ceiling cavities it must be done by an installer registered with an Australian Communications and Media Authority (ACMA) accredited industry Registrar. ACMA is the federal regulator responsible for the industry-managed cabler registration scheme. Your service provider may be able to recommend a registered cable installer in your area. Other temporary cabling such as plugging your own router or telephone into the Network Termination Device can be done by yourself if you wish.

IMPORTANT SAFETY WARNINGS

Please read these notes carefully before attempting to fit or replace a battery in your Power Supply Unit.

To reduce the risk of fire or electric shock, do not remove the cover of the Power Supply Unit except to service the battery. There are no user serviceable parts inside the Power Supply Unit except the battery.

To avoid electric shock, switch off at the power point and unplug the Power Supply Unit from the 240V AC power supply before servicing the battery.

The battery can power hazardous live parts inside the Power Supply Unit, even when the 240V AC power supply is disconnected.

During a mains power failure the Power Supply Unit will only power your voice (UNI-V) ports which have a connected phone service from your service provider using a standard non-powered phone. It will NOT power VoIP or 'internet phones' connected to your data (UNI-D) port or any other mains powered phones, alarms or other devices that do not have their own backup batteries.

To prevent the risk of fire or electric shock, your Power Supply Unit should be installed in a reasonably warm, dry indoor area, free from condensation and excessive dust.

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